cent. in thirteen years, owing to the deposition of gravel and sediment, while the highwater level had risen to such an extent as to pile floating debris six feet deep on the bridge floor in times of flood. The alterations included some reinforcements, besides the raising of the whole structure about five feet. The bridge was continuous over a center pier, and had two main vertical posts there and four vertical end posts. To each of these posts an inclined strut was attached in a transverse vertical plane, presenting a surface for the top of a hydraulic jack to act upon. Eight special hundred-ton jacks were used, with an eight-inch stroke and a working pressure of four hundred atmospheres, the piston being nearly 0.7 in diameter. The fluid used was a mixture of water, alcohol and glycerine. Sixteen men operated the jacks, their movements being synchronized by a code of signals, designed to secure uniformity of action. The bridge was raised a foot or two by short lifts, followed by thoroughly blocking and then building under one course of cut-stone masonry. The total load was five hundred and forty-six tons, and the maximum load on each jack was eighty-seven tons. The bridge was raised in four stages during intervals between trains. The longest interval between trains was about two hours. The weight of trains was rigidly restricted during the time the bridge was undergoing repairs, and their speed was limited to three miles an hour in crossing the bridge. In addition, a special block system was organized upon that section of the line upon which the bridge is located, so that operations could be suspended and the track restored five minutes before the arrival of a train at the site.

BILL NYE'S TEXAS RIVAL.

He Is Envious and Wants to Write for the New York World.

This curious letter has been received by the New York World from an admirer who lives in Texas:

Dr Sr I commenced reedn ur paper 10 years ago anain't red nary uthr senc; yu orter giv me a job rity furt. Tha sa bil ni gits pade fur his ritin? an I consdr me hispear—I hait 2 ask for his job but u nosewells Iddu thet bils pladout; I hev got th finst mule teem in Tarrant Co en ken travlt les expenc onu then bil? so let me no trounc fuel hyr the foar cotton pickin. I am postd on evrything an lik travlyn on ritin, uall don't ject I don't reckn fur me to talk mi famly long. I no I kin du wel I aint got a colig egikashun an u end deduck suthn on akount uv pure spelyn, but Idres with more decenc then bil ni hees a fool to put his picturn the papr. I am the bst lukn man nt mite B a help to put meen th papr. I wil farwd my foatygraf. I reckon ual neadnt he feardt sen my salryn edvanc th Poast Mastyr hyrsmi best friend: Right 2 hym bowt mi honst. I leav th salry alltu as uall no the valu uv litratoor prodducks betr ur iddu I kin rite potreto:

I am th saim Sandy Sam Newark Texas Tarrant Co.

EARNED HIS LIBERTY.

Tactics of a Snake Whose Rest Had Been Disturbed.

The first law of animated nature is self-preservation. The means employed to attain this end are varied and interesting. Some animals depend upon strength, some upon swiftness, some upon coats of mail, others upon poison glands; but with many the main reliance seems to be hypocrisy or simulation. A correspondent of the Popular Science News gives an interesting account of the performance of a snake when it found itself suddenly in danger.

"While searching for snails I turned over an old log and disturbed a snake, called by our negroes a 'spreadin' arrow.' The tactics pursued by this snake were curious.

"First he erected his head and neck, and flattened them out till they seemed no thicker than cardboard, thus increasing his apparent size, and he took care not to be seen edgewise. The shape of his head changed. It took a pronounced triangular form similar to the head of our most venomous snakes. Then his tail, with the aid of a dry leaf, was proclaiming that it was the tail of a rattlesnake.

"All this, coupled with an ominous hiss, was calculated to strike terror to the heart of his disturber, as for a moment it did. I regained my courage, however, and began to poke the serpent gently with a stick, when finding 'bluster' of no avail, he sought safety in flight.

"Repeated 'headings off' showed him how futile were his efforts in that line, and he altered his tactics again. He turned on his back and remained motionless. I threw him up six feet from the ground, and so quickly did he turn over that he seemed to strike on his back.

"Once on his back, nothing could induce him to move. Tapping, prodding, twisting his tail—all were in vain. Then I suspended him from the limb of a tree, retreated a little and watched. At the end of two minutes the reptile moved. Slowly he turned on his spinal column as on an axis, surveyed the premises and, seeing nothing dangerous, dropped to the ground and was making off.

"At my approach he 'died' again. After sundry other proddings, which failed to move him, I rewarded him for his cleverness by giving him the liberty which he certainly had earned."

A PECULIAR SUBSTANCE.

Glycerine Hardly Affected by Either Heat or Cold.

One of the great advantages of glycerine in its chemical employment is the fact that it neither freezes nor evaporates under any ordinary temperature. No perceptible loss by evaporation has been detected at a temperature less than 200 degrees Fahrenheit, but if heated intensely it decomposes with a smell that few persons find themselves able to endure. It burns with a pale flame, similar to that from alcohol, if heated to about 300 degrees, and then ignited. Its non-evaporative qualities make the compound of much use as a vehicle for holding pigments and colors, as in stamping and typewriter ribbons, carbon papers, and the like.

If the pure glycerine be exposed for a long time to a freezing temperature it crystallizes with the appearance of sugar candy, but these crystals being once melted it is almost an impossibility to get them again into the congealed state. If a little water be added to the glycerine no crystallization will take place, though under a sufficient degree of cold the water will separate and form crystals, amid which the glycerine will remain in its natural state of fluidity. If suddenly subjected to intense cold, pure glycerine will form a gummy mass which cannot be entirely hardened or crystallized. Altogether it is quite a peculiar substance.

Blair and Lincoln.

Austin Blair, the "war governor" of Michigan, who died recently, once told a correspondent how his feelings toward Lincoln underwent a change. Said he: "I was greatly opposed to his nomination, and it was a long time before he won my entire confidence. He was not only a strong, wise man, but he had the great faculty of knowing how to bide his time. I, as well as others, believed a proclamation emancipating the slaves should have been issued months before it was done. Finally, weary of urging and waiting, we called a convention to meet at Altoona, Pa. The very day we met the president issued his emancipation proclamation, leaving us little else to do but send to him a delegation thanking him for what he had done. It was hard to get the start of him, and he seemed to know just when the opportune period had arrived to perform a public act."

Wanted Water.

During a continued dry spell in south Florida reptiles often are obliged to resort to unique methods for obtaining fresh water. One need not be surprised while pumping water to see little brown frogs issue from the pump, and one man was rather startled while pumping to see a snake two feet long issue from the spout, and, upon striking the ground, quickly crawl under a house. The reptiles crawl into the pump to enjoy the water held up by the valves. It would be impossible for them to come up from below, as the well consists merely of a small pipe, driven deep into the ground, having a strainer over the bottom.

Deep Waters.

It is a remarkable fact that the deepest parts of the sea are in all cases very near the land. The deepest sounding known, 4,665 fathoms, or 27,930 feet, was obtained 110 miles from the Kurile islands; the next deepest, 4,561 fathoms, was found seventy miles north of Porto Rico. With a few exceptions like these the depth of the oceans, so far as now known, does not reach 4,000 fathoms, or four sea miles. The north Pacific has a mean depth of 2,500 fathoms, the south Pacific of 2,400, the Indian ocean of 2,000, and the Atlantic, by far the best investigated ocean, has a mean depth of 2,200 fathoms.